

TITLE 326 AIR POLLUTION CONTROL BOARD

#99-125(APCB)

SUMMARY/RESPONSE TO COMMENTS FROM THE SECOND COMMENT PERIOD

The Indiana Department of Environmental Management (IDEM) requested public comment from January 1, 2000, through January 31, 2000, on IDEM's draft rule language. IDEM received comments from the following parties:

AK Industries, Incorporated	AKI
AOC	AOC
BPAmoco	BPA
Composites Fabricators Association	CFA
David A. Vollrath	DV
DeRolf Environmental Consulting Agency, Inc.	DECA
Environmental Solutions, LLC.	ESL
Formula Thunderbird Products	FTP
Global Glass, Incorporated	GGI
Godfrey Conveyor CO., Incorporated	GCC
Graves Spray Supply	GSS
Harris-Kayot	HK
Monaco Coach Corporation	MCC
National Marine Manufacturers Association	NMMA
Prodesign	PRO
Rinker Boat Company	RBC
Smoker Craft, Inc.	SCI
Starcraft Marine L.L.C.	SML

Following is a summary of the comments received and IDEM's responses thereto.

Applicability (326 IAC 20-25-1)

Comment: The fiberglass rule should be a volatile organic compound (VOC) Article 8 rule and not a toxic or maximum available control technology (MACT) rule. This is consistent with the testimony and record for the legislative bills, especially Senate Bill 69's hearing testimony. The rule was always referred to as a reasonable available control technology (RACT) rule or a formalization of the presumptive best available control technology (BACT). The rule is a natural fit in Article 8, where the proposed controls are consistent with and familiar to those companies already subject to Article 8. If IDEM is going to continue to promote the reinforced composite

rule as a toxic rule, the regulated community needs to hear compelling reasons for such a decision. Being a VOC rule versus a toxic rule offers certain advantages like:

- The rule has value after the federal MACT floors are finalized.
- Applicability levels are different so sources not subject to the federal rule could be subject to a state rule, such as larger sources with minor fiberglass operations.
- A VOC rule would maintain a requirement for economic feasibility, which has been one of the most difficult measures to find a way to address in MACT.
- A VOC rule would allow more diversification for distinct operations (subcategories) or process limits.
- A VOC rule would be more amenable to change than the federal rule or a state MACT rule. As technology improves or new fiberglass technologies are developed a VOC rule could be amended. This is especially important for developing technologies that may not be recognized on the federal level.
- A control technology database currently exists for the reinforced fiberglass industry.
- With a MACT rule, there is a preconceived notion that we must meet or exceed the federal MACT (gap filling) and no notion exists for a VOC rule.
- Pollution prevention measures have been shown to be comparable in reducing emissions to possible MACT add-on controls, but with numerous benefits and none of the characteristic detriments of add-on controls such as fuel consumption, combustion emissions, wasted product, and reduced incentives to refine raw materials.
- A VOC Article 8 rule follows the “keep it straight and simple principle”.
(ESL)(GGI)(MCC)

Comment: The history of HB1919 makes it clear that it was not designed to be a MACT rule, but rather a RACT/BACT rule regulating styrene as a VOC in fiberglass manufacturing processes, other than boat manufacturing. (FTP)(HK)(GCC)(PRO)(RBC)(SCI)(SML)

Response: Indiana’s air rules are separated into articles, with each article focused on regulations for a particular pollutant or class of pollutants. This comment argues that the styrene rule should be included in Article 8 which addresses volatile organic compounds, rather than Article 20 which addresses air toxics. IDEM’s focus in developing this rule has not been on whether it requires reasonably available control technology (RACT), best available control technology (BACT), or maximum achievable control technology (MACT) but, as directed by the Indiana General Assembly, on establishing a level playing field and known reasonable emission reduction requirements for the composite plastics industry. Specific reasons and responses to the comments are as follows:

- Styrene, the pollutant of concern from the fiber reinforced plastics composites industry, is both a volatile organic compound (VOC) and a hazardous air pollutant (HAP). The emission reduction requirements are appropriate for Article 20, and would not differ significantly if the rule were in Article 8. It will be easier to ensure consistency between the state and anticipated federal rule if they are in the same article.

- If the draft styrene rule is part of the Article 8 rules, the applicability threshold would be established at fifteen (15) pounds of actual VOC emissions per day. This is considerably lower than the proposed applicability for major HAP sources. IDEM believes applying the rule to very small sources could create an economic hardship, without accompanying environmental benefit.
- Recent BACT determinations and industry comments suggest that the draft rule requirements, after revisions from comments, represent BACT and RACT for these sources.
- IDEM believes that emissions from sources not subject to the rule, as proposed, would be insignificant.
- IDEM has added subcategories and would consider the possibility of additional subcategories, if appropriate.
- The proposed rule does not prohibit or penalize sources for developing new technologies or using pollution prevention.
- The RACT/BACT/LAER, lowest achievable emission rate (LAER), clearinghouse maintained by U.S. EPA does not contain recent information for the fiber reinforced plastics industry and is of limited value for this rulemaking. Recent case-by-case BACT analyses made pursuant to 326 IAC 8-1-6 and MACT determinations made pursuant to 326 IAC 2-4.1 have revealed technologies that are deemed effective and reasonable for the industry. These have been incorporated into the rule.
- IDEM has no preconceived MACT levels for this draft rule but believes the draft rule should represent current BACT determinations. Just because it's in Article 20 does not mean it's a MACT level of control.
- The draft rule encourages pollution prevention; it does not require add-on controls. However, the draft rule does allow add-on controls to be used alone or as part of an emissions averaging compliance approach.
- The emission reduction approach used in the draft rule is independent of placement within the Indiana Administrative Code (IAC).

Comment: History shows that the U. S. Congress and EPA have kept the boat manufacturers in a group separate from the Reinforced Plastic Composite Fabricators. This separation should continue and the boat builders should be excluded from this regulation. Since our companies are basically already meeting the emission requirements of the proposed rule, this rule will not cause us to do anything that will reduce emissions. Our companies have been proactive in reducing emissions. (AKI)(FTP)(HK)(GCC)(RBC)(SCI)(SML)

Comment: HB1919 should not apply to fiberglass boat building because boat building is not specifically mentioned in HB 1919. (ESL)(FTP)(GCC)(GGI)(HK)(NMMA)(RBC)(SCI)(SML)

Comment: If boat manufacturing is included, the rule must recognize differences between boat manufacturing and reinforced plastics and be consistent with developing national standards. (NMMA)

Response: Boat building is not specifically mentioned in HB1919, but the air pollution control board is directed to establish appropriate standards for control of air pollution from new and existing sources in the reinforced plastic composites fabricating industry. Since numerous boat manufacturers use reinforced plastic composites open molding processes to fabricate their products and are major sources of styrene emissions, IDEM believes that it is appropriate to include boat builders in this rule. However, a separate category for boat builders has been added to Section 3, Emission standards.

Comment: At the end of the sentence in 326 IAC 20-25-1(a)(2), add “ and not other processes”. There are adhesives and caulks that have styrene in them, which come out of a tube, and are not meant to be included. (SCI)(SML)

Response: The rule applies to open molding processes. It is not necessary to include all processes that are not open molding.

Comment: An exemption should be written for minor sources that emit less than 5 tpy of styrene and consistent with the Article 8 applicability requirements, facilities with potential emissions below 25 tpy would not be subject to the rule. (MCC)

Comment: An exemption should be written for minor sources consistent with current Article 8 applicability requirements. (ESL)(GGI)

Response: Article 8 rules generally apply to sources whose actual emissions are greater than fifteen (15) pounds per day or two and seven tenths (2.7) tons per year, but they are not required to obtain a permit unless their potential emissions are twenty-five (25) tons per year. While IDEM believes that an exemption level of five (5) tons per year is too high for sources emitting styrene, emission reductions from sources smaller than three (3) tons per year would be insignificant. The applicability emission level of the draft rule is consistent with the potential to emit thresholds for U. S. EPA MACT requirements. The draft has been revised to apply to sources with actual emissions greater than three (3) tons per year.

Comment: Applicability determinations in 326 IAC 20-25-1(a)(3) should correspond with established 326 IAC standards. Change the applicability threshold for this rule to correspond with established Article 8 or Article 2 thresholds. (PRO)

Response: 326 IAC 2-4.1-1, Major Sources of Hazardous Air Pollutants, and 326 IAC 2-7-2, Part 70 permits: applicability, includes sources whose potential to emit is ten (10) tons per year of a single HAP and twenty-five (25) tons per year of any combination of HAPs. 326 IAC 8-2, Surface coating emission limitations, applies in certain counties to sources that have actual emissions greater than fifteen (15) pounds of VOC per day before add-on controls. The draft rule has increased the applicability level to three (3) tons of actual styrene emissions per year.

Comment: The rule should not address new or reconstructed sources. These should be left to the federal MACT rule. (ESL)(GGI)(MCC)

Response: HB1919 requires the air pollution control board to adopt rules to establish appropriate standards for control of air pollution from new and existing sources in the reinforced plastic composites fabricating industry. IDEM believes the most appropriate method for addressing new and reconstructed sources subject to 326 IAC 2-4.1-1, case by case MACT, is to exempt them from Section 3, emission standards.

Comment: MACT will encourage resin and gel coat suppliers to switch from styrene and methyl methacrylate to other non-HAP monomers, such as vinyl toluene. If Indiana sets VOC limits that are based on EPA's HAP limits, then resins and gel coats developed to meet MACT may not meet the Indiana rule. Accordingly, Indiana's rule should address only HAPs, and not VOCs generally. (CFA)

Response: IDEM agrees that styrene should be regulated as a HAP and resins and gel coat suppliers may be motivated to switch from styrene and methyl methacrylate to other nonHAP monomers, such as vinyl toluene. Vinyl toluene is a VOC but much less volatile than styrene and will emit less VOC from open molding processes. Such sources would be subject to Article 8 rules.

Definitions (326 IAC 20-25-2)

Comment: The definition of "As applied" should leave out the words "adhesive and gluing". (SCI)(SML)

Response: IDEM believes the term "as applied" is inappropriate to this industry because the formulation changes during the application process with the addition of fiberglass material and catalyst. The definition "as applied" has been deleted and replaced with "delivered to the applicator".

Comment: Please add a definition for "emission unit". (PRO)

Response: "Emission unit" is defined at 326 IAC 1-2-23.5.

Comment: The following definitions should be added. "Skin coat" is a thin protective layer of resin, used in boat building, applied between the gel coat and laminate that provides corrosion resistance and prevents osmotic blistering and "base coat gel coat" is an interior gel coat, used in boat building, to protect the laminate. Many boat builders supplement virgin base coat by using recycled scrap gel coat as base coat gel coat. (NMMA)

Response: IDEM believes that a definition for "skin coat" is a subcategory of definitions included in the draft rule such as "corrosion resistant". However, definitions of "base coat gel coat" and "skin coat" have been added.

Comment: The definition of "corrosion resistant products" should be consistent with the proposed definition in an August 18, 1998 letter to Madeleine Strum at U. S. EPA. A part of that

definition is: "A corrosion resistant product is made using a corrosion-resistant resin, and is manufactured to an industry standard related to corrosion resistance or is manufactured for a given end-use involving chemical exposures or products needing high heat resistance or high strength". (CFA)

Response: IDEM agrees and has added the proposed definition of "corrosion resistant products" to the draft rule.

Comment: One of the most important parts of the rule will be in definitions. Good descriptions on technologies such as "flowcoaters" and operations such as "open molding" are needed. (ESL)(GGI)(MCC)

Comment: "Open molding" should be defined as: "The application of resin or gel coat to an open mold, using manual (bucket and brush or roller), mechanical (atomized or non-atomized; non-atomized is the use of flow coaters, flow choppers, pressure fed rollers, or other non-manual processes that does not result in the formation of small atomized droplets of resin, or filament winding (application of resin to strands of glass using a resin bath, and then winding the wet glass onto the mold). Open molding does not include pultrusion or wet system or liquid compression molding." (CFA)

Comment: With the advancement in technology in equipment design, gel coat can now be applied with a flow coat application. Therefore, gel coat should be included in the description of "flowcoater" along with the word "resin" in definition #10.(GSS)

Comment: In definition #19, "non-spray resin application technology", the phrase "or broken into droplets" should be eliminated since this is a characteristic of fluid dynamics and would be evident after the continuous consolidated streams of resin leave the tip of the flow coat applicator. The streams will then begin to de-energize and break into droplets even as they continue in a stream pattern of resin or gelcoat toward the part. Also, the phrase "with chopped glass roving" should be eliminated. Many manufacturers using hand application use a flow coater to wet out glass and not to apply chopped glass. The stream pattern is no different than described in definition #10 for "flow coater". (GSS)

Response: The following definitions have been changed in the draft rule: "non-spray resin application technology" definition has been changed to "non-atomized"; "flow coater" has been changed to include "gel coat"; "filament winding" has been added; and "open molding" has been changed to be consistent with the comment above from CFA.

Comment: Regarding 326 IAC 20-25-2, Definitions, (20) "Open Molding Process" should not be redefined to exclude patching and joining operations. To exclude explicitly such operations would in effect encourage firms to avoid controls on these relatively wasteful and ad hoc procedures. The draft language should stand because it will have the beneficial effect of promoting efficient use of materials and discouraging wasteful, polluting operations. (DV)

Response: Patching and joining operations are intermittent repair activities, classified as insignificant activities in Article 2, Permit Review Rules, and are not open molding processes.

Patching and joining operations can reduce emissions by reducing mold production requirements. IDEM agrees that wasteful polluting operations should be discouraged.

Comment: “Polymer cast molding” should be added to the definitions and clarified that it is a closed tooling process and not subject to the rule. (MCC)

Comment: “Patch repair and other repair or body work processes” should be added to the definitions and clarified that they are out-of-mode processes and not subject to the rule. (MCC)

Response: IDEM does not agree that definitions should include all those processes that are not subject to the rule. “Polymer cast molding” is not included in the open molding definition and is not subject to the rule. “Repair” is not production and is not subject to the rule.

Comment: It would be beneficial if a minimum coloring substance percentage were established in definition #21, “pigmented resins”. (PRO)

Response: The term “pigmented resins” is not used in the draft rule and will be deleted. However, a definition for “pigmented gel coat” has been added.

Comment: Remove definition #24, “reconstruction”. This rule has no additional requirements for reconstructed sources. (PRO)

Response: 326 IAC 20-25-3(f) includes reconstructed emission units. However, “reconstruction” is defined at 326 IAC 1-2-65 and has been deleted from this rule.

Comment: IDEM should preserve the definitions and emissions standards of the draft rule, not weaken them. These strong new rules will encourage the reinforced plastics composites fabricating industry to become more competitive and reduce wasteful, polluting production materials and processes. (DV)

Response: IDEM agrees that the new rules will encourage the reinforced plastics composites fabricating industry to become more competitive and reduce wasteful, polluting production materials and processes. Some definitions and emission standards have been added or revised to add clarity and to incorporate new information.

Emission standards (326 IAC 20-25-3)

Comment: IDEM should use all data sources available to establish emission control levels for reinforced composites. The draft rule relies largely upon the U. S. EPA’s draft MACT “floors”. EPA may revise the databases and the “floors” will undoubtedly change. Development of an Indiana rule based exclusively on EPA’s proposed MACT control levels is premature. IDEM should use the MACT databases as a starting point, but also check any proposed control levels that result from it with additional information. (BPA)

Response: IDEM is using all available data sources of information to establish emission control levels for reinforced composites fabricating open molding processes. The revisions to the

draft rule have been made in response to comments in which additional information has been supplied.

Comment: The manual application categories with their corresponding maximum HAP content values should be incorporated into a base resin application category in 326 IAC 20-25-3(a). (PRO)

Comment: The distinctions between manual and mechanical applications should be dropped. There is no increase in emissions from a manual application versus a mechanical application. This would simplify the rule with no substantial impact. (AKI)(MCC)

Comment: Manual non-corrosion resistant resins should be increased to 35 %. This category includes a very diverse group of operations such as body shops, repair shops, seam filling and single piece fabricators. This is a very small percentage of the whole industry and for those facilities that do both manual and mechanical applications, the requirement for a special resin is not justified or reasonable. (AOC)(CFA)(ESL)(GGI)(MCC)

Comment: Manual application of tooling gelcoat should be increased to 45% VOC for the same reasons as manual noncorrosion resistant resins and because this is consistent with what is available in the market place. (MCC)

Response: Manual and mechanical resin application emission limit subcategories have been merged together. The HAP content limits for mechanical application subcategories in the draft rule will be the limits for both manual and mechanical resin application. IDEM believes that no significant environmental impact will result from merging these subcategories and it is consistent with requests to keep the requirements of the rule simple to implement.

Comment: NMMA requests that IDEM adopt the following standards and exemptions for boat manufacturing processes: production resin, average 35% HAP material with non-atomized application equipment; pigmented gel coat, average 34% HAP material; clear gel coat, average 48% HAP material; base coat gel coat, average 34% HAP material; skin coat, exempt from HAP material percentage with nonatomized application equipment; tooling resin, exempt or less than 43% HAP material with nonatomized application equipment; tooling gel coat, exempt or less than 48% HAP material. (NMMA)

Response: The draft rule for preliminary adoption has been changed to include a category for watercraft manufacturing with the following HAP limits: production noncorrosion resistant unfilled resin, average thirty-five percent (35%) HAP material with non-atomized application equipment; pigmented gel coat, average thirty-four (34%) HAP material; clear gel coat, average forty-eight percent (48%) HAP material; base coat gel coat, average thirty-four percent (34%) HAP material; tooling resin, forty-three percent (43%) HAP material with nonatomized application equipment; tooling gel coat, forty-eight percent (48%) HAP material. Skin coat has been included with the corrosion resistant subcategory.

Comment: IDEM's special category for corrosion resins is appropriate, but the control levels must be revised. Altering resin chemistry affects the properties of the final polymer because styrene is an integral part of virtually all composite resins. Determining maximum styrene content allowable in corrosion resins based upon U. S. EPA's point value equations does not accurately reflect the EPA's MACT floors and is misleading. Styrene resin content is typically not used as an emission control technique in the corrosion resin segment of the industry. Therefore, IDEM should revise its rule to delete styrene content limits for corrosion resins and replace the styrene content limits with appropriate controls used by the industry and consistent with those identified by EPA. (BPA)

Comment: Low-HAP corrosion resins should not be applied as an emissions control for manual application of corrosion resins. A letter to U. S. EPA from CFA dated December 15, 1999 addressing industry review of the EPA MACT databases states: "...our position [is] that the manufacture of corrosion-resistant composite products requires that the resins be selected according to the chemical and physical demands of the end use. On a practical level, manufacturers of corrosion-resistant composite products often have little flexibility in selecting resins according to desired HAP content, emission characteristics, or other criteria. Resin and HAP content selection is highly constrained by resin manufacturer recommendation or end use specifications for the use for which the products are intended. This is not just an artifact of the current marketplace, but a practical consequence of the limitations of various resins, and the liability should an alternative resins be substituted and the product fail in use. IDEM should abandon its styrene content based standard for all corrosion resin applications. (BPA)

Comment: Monomer content is not really a "control" for the manufacture of corrosion resistant products. Molders of these products must select resins (and monomer content) based on the chemical and physical environments to which the products will be exposed, and/or end user specifications or industry standards. The 48% HAP limit should apply to all open mold processes used for the manufacture of corrosion resistant products: manual, mechanical, and filament winding. (CFA)

Comment: IDEM should use as a guide the styrene content limits contained in state rules for Illinois and Maryland, and the air district rule in California. Other states have addressed the question of HAP (or VOC) content limits in corrosion resins, gel coats and tooling and have concluded that a cap of no less than 48% HAP is appropriate. IDEM should employ the industry standard of 48% styrene for corrosion resins until such time as EPA issues its final MACT standard. (BPA)

Comment: Corrosion fabricators need to use resins with up to 48% HAP to make products that will stand up to the various end uses. HAP content is not a "control" for the manufacture of corrosion resistant and other specialty products needing high strength as well as resistance to heat and chemicals. (AOC) (CFA)

Response: The U. S. EPA MACT "floors" and point value equations provide calculations for corrosion resistant resins with nonatomized application to be forty-eight percent (48%) HAP content. The published draft rule and the EPA equations require corrosion resistant resins with

thirty-eight percent (38%) HAP content and atomized application. The HAP content limits are consistent with other state rules and an industry proposal for Indiana RACT for composites manufacturing submitted to IDEM dated August 2, 1999. The use of nonatomized application technology and the averaging provisions of the rule should provide the flexibility necessary to accommodate specialty products.

Comment: IDEM should abandon its reliance on styrene content overall and focus on emissions from corrosion resins. The technical basis for the Indiana and EPA rules appears very different. IDEM relies upon styrene content as the basis for its rule, whereas EPA's draft MACT floors are based upon emissions of HAP constituents. IDEM's rule should focus on emissions as well. (BPA)

Response: The point value system used by U. S. EPA for the draft MACT floors combines specific emission reduction techniques into a numerical standard. It is not an emission limit or emission factor and is calculated based on resin HAP content and application method. The draft rule presents HAP content limits and application methods.

Comment: HAP limits for gel coats are too low. They do not reflect the materials that are needed for a large variety of end-uses, many of which require the use of special materials or colors with increased resistance to different environments. (AOC)

Comment: Clear production gelcoats should be set at 45% VOC content. This basically reflects what is available in the marketplace. (DECA)(ESL)(GGI)(MCC)

Comment: IDEM should revise its styrene content limits for clear gel coat to reflect resins available in the market and to ensure that the range of properties required for gel coats are maintained. Many gel coats are formulated with two HAPs, styrene and methyl methacrylate, based upon the desired properties and service conditions to which the product will be subject. These two HAPs allow for a wider range of properties but also result in a wider range of HAP contents than is typical in resins. Restricting clear gel coats to very low HAP levels is likely to result in unintended consequences such as lowering service life of products. (BPA)

Comment: The Indiana rule should not restrict HAP content for clear gel coat to less than 50% and for pigmented gel coats to not less than 45%. These levels reflect the need for higher HAP gel coats for products needing to meet the standard for plastic plumbing fixtures and other specialty applications. (CFA)

Response: The U.S. EPA draft MACT point value equations calculate the gel coat with atomized application to be thirty percent (30%) HAP content for pigmented gel coat, forty-four percent (44%) for clear production gelcoat, and thirty-eight percent (38%) for tooling. Some companies have accepted a thirty-seven percent (37%) HAP content limit for pigmented gel coat in their permits and IDEM believes thirty-seven percent (37%) HAP content is appropriate. To meet the standards for plastic plumbing fixtures and other specialty products, the draft rule has been revised to include gel coats for American National Standards Institute (ANSI) certification requirements.

Comment: Filled resins should be divided into two categories: less than 40% filler and greater than 40% filler. The category with less than 40% filler should be able to use 35% VOC because this resin requires less wetting and can commonly survive with general purpose resins. The category with greater than 40% filler should be 38% VOC because this filler has greater wetting and bonding requirements which require higher styrene levels. (MCC)

Comment: Filled resins should be divided into two categories: less than 35% filler (resin with 35% VOC) and greater than 35% filler (resin with 38% VOC). Businesses who are using high amounts of fillers are already reducing the amount of resin being used compared to standard industry practices. Since they are lowering the styrene emissions automatically by adding high amounts of fillers, they should be allowed to use higher styrene content products for ease in application and product durability. (ESL)(GGI)(MCC)

Comment: Clarifications should be made for example that a filler is not adding fibrous strand to the resin. (ESL)(GGI)

Comment: Another section for filled application should be added. The styrene content for a filled application should be at 43% level. A filled application reduces the amount of material used versus neat systems. (AKI)

Response: IDEM agrees that by adding high amounts of fillers, the styrene emissions are automatically lower. The draft rule has been changed to reflect that the production noncorrosion filled resin HAP content has been increased to thirty-eight percent (38%). The definition of filled resin has been changed to greater than thirty-five percent (35%) filler which does not include adding fibrous strand. Resin with less than thirty-five percent (35%) filler will be considered unfilled and the HAP content limit will remain thirty-five percent (35%)

Comment: An increasing number of products are made with a thermoformed thermoplastic sheet (typically acrylic) as the exterior surface of the product (instead of gel coat). The filled resin system that is applied to the thermoplastic sheet must contain at least 42% HAP to provide adequate bonding of the laminate to the surface sheet. The Indiana rule should similarly allow the use of filled resin with 42% HAP for this application. (CFA)

Response: Since the gel coat emissions are eliminated, IDEM agrees that for products made with a thermoformed thermoplastic sheet as the exterior surface of the product, the resin can contain forty-two percent (42%) HAP content. A separate subcategory for this process has been added to the draft rule.

Comment: Casting should be added as a category with 37% VOC and add a category for patch repair with 60% VOC. (ESL)(GGI)(MCC)

Response: Polymer casting and patch repair are not considered open molding. The U.S. EPA draft MACT floors document does not include these processes in the open molding category.

Comment: Add a category for fill primer and sandable gelcoats with 38% VOC. (ESL)(GGI)(MCC)

Response: The emissions averaging provisions in the draft rule gives sources the flexibility to use different products. Therefore, new subcategories for fill primer and sandable gel coats have not been added.

Comment: HAP limits for tooling resins are too low. This is a small use application, and such a limitation will cause the production of inferior tooling while not having any significant impact on overall emissions. (AOC)

Comment: Monomer content for tooling resins should be 43%. (AKI)

Comment: IDEM should abandon styrene content limits for tooling resins or use the 48% to 50% styrene content limits applied in other state's rules. In tooling applications, service life and performance properties such as dimensional stability, heat resistance, shrink and chemical resistance are critical. The CFA reports that only about one (1) percent of all resins used in composites are tooling resins. Long-lived tools minimize the use of tooling resins. (BPA)(CFA)

Response: IDEM believes that minimum standards should be maintained for tooling resin and tooling gel coat to achieve reasonable emission reductions. The draft U.S. EPA MACT point value equations calculate the nonatomized tooling resin as fifty-five percent (55%) HAP content and atomized tooling resin as forty-three percent (43%) HAP content. The emissions averaging in the draft rule gives sources the flexibility to use different products without raising the HAP content of a particular subcategory.

Comment: Tooling gelcoats need to be raised to 45%. This is consistent with what is available in the market and for this critical service, we need to be careful that we don't regulate inferior products. In addition, the minor volume of material used in this application presents little environmental harm but significant economic risk to companies if the result is bad parts. (MCC)(DECA)

Comment: Tooling gel coat should be increased to 42% VOC. Lower styrene content in tooling resins and gelcoats takes away from tooling life and will force a need to replace molds more frequently. If the VOC content is not raised, exempt tooling operations from this rule because they are minor in volume. (ESL)(GGI)

Comment: Tooling gelcoat should be increased to 40%. (MCC)

Response: The draft U.S. EPA MACT point value equations calculate the atomized tooling gel coat as thirty-eight percent (38%) HAP content which is what has been included in the draft rule. The emission averaging provision in the draft rule gives sources the flexibility to use different products without raising the HAP content of a particular category. IDEM agrees that tooling gel coats require a high degree of strength for improved mold life. Reducing the quality of molds can result in greater emissions to the atmosphere from the additional mold making that would be required. IDEM proposes a tooling gel coat standard of forty-five percent (45%) for nonwatercraft and forty-eight percent (48%) for watercraft, with the understanding that the MACT floor may be significantly different.

Comment: The HAP contents listed in the table in Section 3 for filament winding are less than half of the numbers listed in EPA's floor document. The numbers should be changed to 45%, which is consistent at least with the EPA MACT proposal. (ESL)(GGI)(MCC)(DECA)

Comment: Resin for non-corrosion resistant filament winding requires a minimum of 35% monomer content. With a lower styrene content, the material will not release the air trapped in the product, causing an inferior product. The styrene content should be consistent with the CFA model. Filament winding should be an exception in 326 IAC 20-25-3(b). (AKI)

Comment: IDEM should abandon its proposed styrene content limits for filament winding. Knowledge of customers in the industry suggests that styrene content is not an appropriate emissions control for this industry and if imposed, will hamper the fabricator's ability to produce products and meet certain testing specifications such as Underwriters Laboratories (UL) testing. (BPA)

Response: The HAP content for filament winding resins were miscalculated using the U.S. EPA draft MACT point value equations. The correct calculated HAP limits are forty-two percent (42%) for corrosion resistant resin and forty-five percent (45%) noncorrosion resistant resin. Additionally, filament winding emissions account for a very small percentage of the total styrene emissions in Indiana and IDEM believes currently available information is insufficient to establish limits for this category. Therefore, IDEM proposes to delete filament winding from the draft rule. Filament winding emissions will be controlled by the federal MACT to be promulgated in early 2001.

Comment: Regarding 326 IAC 20-25-3, Emission standards, the draft standards for HAP monomer content should be preserved, not revised upward. IDEM's bases for determining these draft standards seem very reasonable. Moreover, the draft standards will have the beneficial effect of encouraging suppliers to develop even less toxic material. Others' comments to allow greater HAP content will retard the competitive process of minimizing waste and toxicity in this industry. (DV)

Response: IDEM agrees that waste and toxicity in the reinforced plastics composites fabricating industry should be minimized and suppliers of raw materials to this industry should be encouraged to develop less toxic materials. IDEM also agrees that certain standards should be maintained at the originally proposed levels. However, as additional information becomes available, some standards will change. As the review process progresses and more information is available to IDEM to evaluate appropriate HAP contents for resins and gel coats, additional revisions or categories may be required in the rule.

Comment: IDEM should adopt exemptions under the rule for tooling resin and gel coat and the use of skin coat resins. For each of these processes, the associated HAP emissions are *de minimis* and the regulatory costs that would result from an emission standard are not justifiable. IDEM can enforce compliance with this incidental *de minimis* use exemption through record keeping. (NMMA)

Response: IDEM believes the proposed emission standards for tooling resin and gel coat and the use of skin coat resins represent RACT/BACT for the affected industries and does not propose exempting these categories.

Comment: NMMA requests that IDEM allow boat builders to use the EPA proposed point value system for averaging emissions. (NMMA)

Response: Subdivision 3(f) of the draft rule states that a source may comply using monthly emissions averaging within each specific material and application category listed in subsection 3(a) without prior approval by the commissioner. A source may employ monthly emissions averaging to meet a standard as stated in subdivision 3(h)(2) of the draft rule with commissioner approval. IDEM believes these provisions provide adequate flexibility and upon approval, the possibility of using U.S. EPA's point value system for determining compliance.

Comment: With advancement in technology for equipment design, gel coats and filled resins can now be applied with flow coaters and should be added as an acceptable means of applying gel coat and filled resins. This issue should be addressed in 326 IAC 20-25-3(b) for materials applied, and if need be, subsection (c) for type of equipment used to apply gelcoat. (GSS)

Comment: Add something that allows new types of equipment, methods or products that are as good or better than the listed ones in 326 IAC 20-25-3(b) and (c).
(DECA)(ESL)(GGI)(PRO)(SCI)(SML)

Comment: Under Section 3(c), add a number (4) for equivalent technologies. As non-spray technologies are developed and proven, they should be available for the gelcoat operations.
(MCC)(PRO)

Response: IDEM agrees. 326 IAC 20-25-3 and the definitions have been revised to reflect the use of additional equivalent application equipment.

Comment: 326 IAC 20-25-3(c) should read: "Unless specified in subsection (b), gelcoat and mechanical application of resin shall include any of the following spray equipment but not limited to: 1) HVLP, 2) airless, 3) air-assisted airless, 4) flowcoaters." (AKI)

Response: IDEM has revised this subsection to allow flowcoaters and other equipment equivalent to that listed in subdivisions (2) through (4).

Comment: Section 3(g)(2)(H) should be eliminated for it serves no environmental purpose but eliminates flexibility for companies. In our industry where change is constant, we never know when product or materials may require the use of application technologies other than those listed. If the company can demonstrate equivalent emissions, options should not be unnecessarily restricted. (DECA)(MCC)(PRO)

Response: IDEM agrees that if a company can demonstrate equivalent emissions, options should not be unnecessarily restricted. Section 3(c) has been revised to incorporate equivalent

equipment. Subcategories requiring nonatomized application technology will not be removed as IDEM believes this would be an unnecessary relaxation of the RACT/BACT standards.

Comment: Controlled spray as an emission reduction technology should be recognized as is currently being done in Oregon. (ESL)(GGI)(MCC)

Response: Communications with Oregon officials indicate that they allow controlled spray on a case-by case basis. Most of their sources are boat manufacturers whose styrene emissions are normally thirty (30) to thirty-five (35) tons per year. Whether they use controlled spray credits or not does not change the level of permit that they need. Indiana sources are different but IDEM does allow controlled spray on a case-by-case basis.

Comment: 326 IAC 20-25-3(g)(2)(F) should be eliminated. Controlled spray is not federally recognized. (PRO)

Response: U.S. EPA representatives have stated publicly that they would not approve controlled spray due to the inability to enforce such a provision. However, IDEM has left the controlled spray provision in the draft rule to accommodate future applicants who can satisfy all of the approval elements and for the automated controlled spray that has been approved by IDEM. Sources have been advised that controlled spray may not be recognized by U. S. EPA.

Work practice standards (326 IAC 20-25-4)

Comment: The Work Practices Standards should identify established practices, similar to what is done in Article 8, but delete any requirements for the written work practices implementation plan. This is burdensome, serves only as a compliance exposure, and does nothing to protect the environment. (MCC)

Comment: Please do not add another written program. Everything in the draft rule is in our air permit or other regulations. Additional programs that duplicate or contradict existing programs are also confusing to government inspectors and could result in erroneous citations. A lot of time is spent trying to satisfy both IDEM and IOSHA inspectors with wording in a written program that changed nothing in the plant. (SCI)(SML)

Comment: Please modify 326 IAC 20-25-4(a) to read: "Each owner or operator of a source or emission unit subject to this rule will operate in accordance with the work practice standards contained in sections (b) and (c)". (PRO)

Comment: Delete 326 IAC 20-25-4, Work Practice Standards in its entirety. The entire section does nothing to protect the environment. The substantial emissions reductions come from proposed 326 IAC 20-25-3. (DECA)

Comment: If no credit is given for these work practice items in the CFA factors, they should not be mandatory. (ESL)(GGI)

Comment: Requiring boat builders to prepare, update, and maintain a work practice implementation plan will place an administrative and economic burden on boat builders. EPA

has recognized this in its work on the boat builders' MACT standard and has no plans to propose a work practice standard for boat builders. (NMMA)

Response: The work practice standards section has been clarified and simplified to reflect generally accepted work practice standards and to include a specific standard relating to proper operation of nonatomized application technology. The requirement to maintain on site a written work practice plan has been eliminated from the section.

Comment: As described in 326 IAC 20-25-4(b)(1) through (5), safe work practices are detailed for proper handling of HAP containing materials and solvents. Equipment design requirements should not be confused with equipment handling. Subsection 6 should reflect that spray equipment should be cleaned without requiring solvent to be sprayed into the air. (GSS)

Comment: 326 IAC 20-25-4(b)(3) should be modified to read: "VOC or HAP containing solvents sprayed during clean-up or resin material changes shall be directed into solvent collection containers". (PRO)

Response: IDEM agrees. 326 IAC 20-25-4(b)(6) has been revised to read "solvents sprayed during clean-up or resin material changes shall be directed into solvent collection containers". However, to restrict this requirement to VOC and HAP containing solvents is not reasonable because during the cleaning process a nonHAP or nonVOC solvent will become contaminated with the VOC or HAP containing material being cleaned.

Comment: 326 IAC 20-25-4(b)(1) should read: "Solvents with HAP contents shall be limited to 220 gallons per year in the clean-up operation." There are times when nonHAP cleaners will not clean the part or product. (AKI)(NMMA)

Comment: Identify a *de minimis* HAP content in 326 IAC 20-25-4(b)(1). (PRO)

Response: IDEM agrees. A provision has been added to allow for a calendar year, the use of five percent (5%) HAP containing clean up solvents not to exceed two hundred ten (210) gallons per calendar year. Sources should be aware that U. S. EPA's current proposed MACT requirements does not allow HAP containing clean-up solvents.

Comment: Please remove the first sentence from 326 IAC 20-25-4(b)(4) and eliminate 326 IAC 20-25-4(c)(1)(D) because they are redundant. (PRO)

Response: The first sentence in 326 IAC 20-25-4(b)(4) and the clause 326 IAC 20-25-4(c)(1)(D) are not redundant. However, 326 IAC 20-25-4 has been revised to improve clarity.

Comment: The Work Practices Standards should not add Resource Conservation and Recovery Act (RCRA) requirements that are outside the scope of this rule. It serves little benefit and raises the issue of whether or not all federal and state rules that may be applicable to a fiberglass operation should be covered. (MCC)

Comment: Please remove the first sentence in 326 IAC 20-25-4(b)(5) and modify the second to read; "Clean up materials, including rags and other wipes may be subject to RCRA hazardous

waste regulations found in 40 CFR 260-270 (July 1, 1998)*, and must be managed accordingly. (PRO)

Response: References to RCRA requirements have been deleted in the draft rule to avoid confusion.

Comment: Please modify 326 IAC 20-25-4(c)(1) to read: "Use closed containers for the storage of the following VOC or HAP containing material." (PRO)

Response: IDEM agrees and has revised 326 IAC 20-25-4.

Comment: Please modify 326 IAC 20-25-4(c)(2) to read: A cover shall be in place on any VOC or HAP containing tank, vat, or vessel with a capacity greater than seven and five-tenths (7.5) liters (two (2) gallons), including containers in which resin or gel coat materials are delivered to the facility, while resin or gel coats are being formulated. (PRO)

Response: 326 IAC 20-25-4 has been revised. IDEM believes it is not necessary to exempt containers less than two (2) gallons.

Operator training (326 IAC 20-25-5)

Comment: Delete operator training. Industries currently train for efficiency reasons. Companies should be responsible for making sure their employees can perform their duties effectively, not the State. The conditions of this section are unduly burdensome and will not result in enforceable emission reductions. (AKI)(DECA)(ESL)(GGI)(MCC)(PRO)

Comment: In boat building, if a gel coater or laminator does not make the grade this employee is either moved to another job in the plant or terminated. EPA has no plans to require an operator training standard in the boat builders MACT standard. (NMMA)

Comment: The rule should contain a minimum of training requirements. (CFA)

Comment: 326 IAC 20-25-5, Operator Training, should be less restrictive in order to tailor to individual plant needs. Stop at subsection (e). As you list 40 CFR 265.16, some inspector could hold the complete training program to these standards. Fifteen years from now do we still need training records from the year 2000? (SCI)(SML)

Response: IDEM recognizes that companies currently train their employees for efficiency reasons and has deleted the operator training section from the draft rule. However, U. S. EPA's final MACT standard for this industry may require operator training.

Testing requirements (326 IAC 20-25-6)

Comment: Please remove 326 IAC 20-25-6(b) because it is redundant. (PRO)

Response: The rule specifies no maximum emission limit. The methods in section 6(b) are included for those sources who may want to use emissions testing as part of an application under

326 IAC 20-25-3(g), approved monthly emissions averaging. IDEM does not believe subsection 326 IAC 20-25-6(b) is redundant.

Record keeping (326 IAC 20-25-7)

Comment: Compliance documentation for companies electing to use compliant materials and approved applicators should be limited to material safety data sheets (MSDSs) on-site. Nothing else is needed to show compliance with this rule. For those companies electing or required to do averaging, compliance record keeping should be limited to: MSDS or certified product data sheets, usage or purchase and inventory records, and tracking application methods. (MCC)

Comment: Reduce compliance determination to: MSDS, usage or purchase and inventory records, tracking application methods for averaging purposes only, semiannual reports, and no compliance certification. (ESL)(GGI)

Comment: 326 IAC 20-25-7(a)(2) should be revised to read “Records shall include either material safety data sheets (MSDS) or manufacturer’s certified product data sheets. Whenever a MSDS or manufacturer’s certified product data sheet specifies a range for the HAP containing monomer, the largest value shall be used for determining compliance with this rule.” (DECA)

Comment: Please add language to 326 IAC 20-25-7(a)(1) exempting sources using all compliant materials from the remaining requirements of this section. (PRO)

Comment: Compliance record keeping in Section 7 should be eliminated and covered in Title V. There is not enough record keeping required by this rule, MSDS, to justify any special record keeping requirements. This is especially true for facilities using compliant materials and technologies and for facilities below the applicability limits. (MCC)(NMMA)

Comment: This rule would add record keeping that duplicates present record keeping requirements. (SCI)(SML)

Comment: Please revise 326 IAC 20-25-7(a)(3)(A) to read as follows: “HAP monomer content of each resin and gelcoat. Also, usage by weight of each resin and gelcoat if and only if averaging is used to show compliance.” Usage is only important if averaging is used to determine compliance. (DECA)

Comment: Please revise 326 IAC 20-25-7(a)(3)(B) to read as follows: “A log of the dates of use. This shall be required if and only if averaging is used to show compliance. If averaging is not used to show compliance, this log is not required.” If averaging is not used, the dates of usage are irrelevant. (DECA)

Comment: Please delete 326 IAC 20-25-7(a)(3)(C). In that all methods other than those specified in proposed 326 IAC 20-25-3 are proscribed, it follows that the only methods used will be those specified. This record is redundant, onerous, and burdensome while doing nothing to protect the environment. (DECA)

Comment: Please delete 326 IAC 20-25-7(a)(3)(D). Section 326 IAC 20-25-3 specifies no monthly total HAP emissions. There is no upper limit specified, and no number could indicate compliance with a nonexistent standard. (DECA)

Comment: 326 IAC 20-25-7(a)(3)(B) is not needed to show compliance. (AKI)

Comment: Remove the words “Including all training records, reports, and notifications” from 326 IAC 20-25-7-(b). Training requirements exceed the Air Board’s statutory authority and do nothing to protect the environment and such record would compound this exceedance of authority. (DECA)

Comment: We need to write a rule that reduces emissions in the interim prior to the federal MACT, but doesn’t generate an unreasonable compliance burden. The intent of the rule should be to make available pollution prevention technology a requirement for all composite fabricators and to encourage the use of low styrene resins and gel coats, especially where they have proven themselves effective in the industry. (MCC)

Response: Record keeping requirements are necessary for sources and regulators to assess compliance. In order to include record keeping conditions in a source’s operating permit, authority must be included in the underlying rule. Section 7(a) of the draft rule has been revised to reflect the documentation that is necessary to demonstrate compliance. The air pollution control board has authority to pass training requirement rules necessary for implementation of the Clean Air Act as amended in 1990 or as directed by state legislation, but as stated above, the operator training section has been deleted from the draft rule.

Reporting (326 IAC 20-25-8)

Comment: 326 IAC 20-25-7 and 8 seem to duplicate existing reporting. Why add to the work load of both industry and IDEM? IDEM is already receiving similar information. Anyone that this rule affects will also need an air permit. If reporting is a must, then just require a copy of Air Permit Report. (ESL)(GGI)(SCI)(SML)

Comment: The rule should require a minimum of record keeping and reporting. (CFA)

Comment: Reporting requirements in Section 8 should be eliminated and covered under Title V permits. Any source subject to this rule would also be considered a major source for purposes of Title V. All Title V sources are currently required to submit compliance certifications once a year by 326 IAC 2-7-6(5). If a source is certified to be in compliance with all applicable requirements, then this rule would be included in that certification. (AKI)(DECA)(MCC)

Comment: Please add language to 326 IAC 20-25-8(a) exempting sources operating in compliance with their Title V permit from the additional requirements of this section. (PRO)

Response: Because the rule will be in Article 20 and is intended to apply to major sources, IDEM agrees with those who commented to simplify the rule and reduce duplicate reporting requirements. Part 70 permit rules already contain a minimum requirement of annual and semi-annual compliance reporting. Therefore, section 8 has been significantly revised to reduce reporting requirements to an initial notification report and an initial compliance report.

New facilities; general reduction requirements (326 IAC 8-1-6)

Comment: The section of the rule addressing Article 8 BACT requirements can be eliminated when this rule is incorporated into Article 8, as it should be. (MCC)

Comment: 326 IAC 8-1-6(c) can be eliminated if this rule is established as an Article 8 RACT rule. (PRO)

Comment: Please delete all proposed changes in 326 IAC 8-1-6. Proposed 326 IAC 20-25-1(b) states that compliance with proposed 326 IAC 20-25 automatically constitutes compliance with 326 IAC 8-1-6. It has not been made perfectly clear to the public that the phrase “emission unit” and “facility” are indeed one and the same and the regulated community must assume that this change has been inserted to extend applicability of 326 IAC 8-1-6. (DECA)

Response: IDEM believes that a rule to control styrene emissions should be in Article 20, Hazardous Air Pollutants. However, revisions to 326 IAC 8-1-6 that were included in the second notice of comment period and 326 IAC 20-25-3(d) have been eliminated. IDEM considers “emission unit” equivalent to “facility”, but prefers the term “emission unit”. At this time, IDEM believes that neither an exemption from 326 IAC 8-1-6 nor changes to 326 IAC 8-1-6 are necessary for the following reasons:

- IDEM believes that the MACT determination for new facilities, pursuant to 326 IAC 2-4.1-1, New source toxics control, will always represent BACT for those facilities, satisfying the requirements of 326 IAC 8-1-6.
- Regarding re-permitting of existing facilities with previous BACT determinations, IDEM believes that by the time this rule becomes effective, most, if not all, such situations will have been resolved under the terms of the non-rule policy published pursuant to HEA 1919. The policy, which has been in effect since November 1, 1999, states that a source’s emission limitations may be increased to reflect the new emission factors, but other conditions of their BACT determination will be revised as well. The revisions are likely to be in keeping with the requirements of this rule, although specific conditions cannot be stipulated since 326 IAC 8-1-6 requires a case-by-case determination.
- The final federal MACT standard for this industry will address new sources. Current indications from U.S. EPA are that the new source requirements may be of sufficient stringency to satisfy the definition of BACT for the purposes of 326 IAC 8-1-6.

Comment: The intent of the rule should be to make available pollution prevention technology a requirement for all composite fabricators and to encourage the use of low styrene resins and gel coats, especially where they have proven themselves effective in the industry. (MCC)

Response: The intent of this rulemaking is to reduce styrene emissions from the fiber reinforced plastics composites industry. IDEM agrees that pollution prevention technologies are effective in reducing emissions at all sources of emissions.

General

Comment: A number of companies are going to be severely impacted by this rule. Others are going to find that technologies and compliant materials are readily available to meet these requirements and they will experience minimal impact. These are the people we are really trying to address with the rule. We want to make reasonable controls a standard for this industry. However, we have to take steps to insure that those others, especially if they present very minor environmental issues because of either their size or volume of material use, are given special considerations and reasonable limits. Manual lay-up operations and tooling operations need to be treated more leniently and given less demanding requirements. The environmental threat from these operations is minimal, but the potential impact on these businesses is substantial. (MCC)

Response: IDEM believes this draft rule represents both reasonably available and best available control for these industries and should not adversely affect major sources. IDEM believes that the emission reduction technologies selected for this draft rule should apply to manual lay-up operations and tooling operations because low emitting spray equipment and lower styrene raw materials are readily available for the industry and all companies in the industry should be able to use them.

Comment: This rule should be kept simple. All the record keeping, and reporting needs to be reduced to a minimal amount to demonstrate compliance with this rule and this rule only. With the suggestions that were offered at the Goshen meeting and from previous written comments, we are very close to a final rule that will serve the intent of the legislature, serve IDEM, serve the public and serve the regulated community. We will have a rule that is simple, effective, that reduces emissions, and is reasonably achievable for the regulated industry. (MCC)

Comment: Keep this rule simple and easy to understand. Rules and regulations should be understandable to most people in our plants. Why duplicate existing regulations or reporting? (SCI)(SML)

Response: IDEM has simplified all sections of the draft rule where appropriate.

Comment: IDEM should incorporate into the rule a provision to sunset the rule once the MACT standard becomes effective. One or another MACT standard will apply to all major sources subject to this rule. As such, it would be duplicative for sources to have two sets of standards when the intent of both is the same. (CFA)(BPA)(NMMA)

Response: Sources are frequently subject to state and federal requirements that are slightly or significantly different. IDEM intends to examine the benefits and environmental impacts of this rule when federal MACT standards are established for the affected industries. At that time, IDEM will determine whether amendments to this rule will need to be made in light of the federal MACT standard.